

CLAIMS

What is claimed is:

- 1 1. A robot, comprising:
2 a mobile holonomic platform;
3 a camera coupled to said mobile holonomic platform;
4 an arm coupled to said mobile holonomic platform; and,
5 a first grasper coupled to said arm.
- 1 2. The robot of claim 1, further comprising a monitor
2 coupled to said mobile holonomic platform.
- 1 3. The robot of claim 1, wherein further comprising a
2 shoulder actuator coupled to said arm.
- 1 4. The robot of claim 1, wherein said arm has an
2 elbow actuator.
- 1 5. The robot of claim 1, wherein said arm includes a
2 first linkage, and a second linkage coupled to said first
3 linkage, said arm having an actuator that moves said second
4 linkage relative to said first linkage in a first degree a

5 freedom in a first mode, and in a second degree of freedom
6 in a second mode.

1 6. The robot of claim 1, wherein said first grasper
2 is coupled to a wrist joint of said arm.

1 7. The robot of claim 1, further comprising a second
2 grasper coupled to said arm.

1 8. The robot of claim 5, wherein said first degree of
2 freedom pivots about an elbow axis and said second degree
3 of freedom slides relative to the elbow axis.

1 9. A robot, comprising:
2 a mobile holonomic platform;
3 a camera coupled to said mobile holonomic platform;
4 an arm coupled to said mobile holonomic platform; and,
5 first grasper means for grasping an object.

1 10. The robot of claim 9, further comprising a monitor
2 coupled to said mobile holonomic platform.

1 11. The robot of claim 9, wherein further comprising a
2 shoulder actuator coupled to said arm.

1 12. The robot of claim 9, wherein said arm has an
2 elbow actuator.

1 13. The robot of claim 9, wherein said arm includes a
2 first linkage, and a second linkage coupled to said first
3 linkage, said arm having actuator means for moving said
4 second linkage relative to said first linkage in a first
5 degree a freedom in a first mode, and in a second degree of
6 freedom in a second mode.

1 14. The robot of claim 9, wherein said first grasper
2 means is coupled to a wrist joint of said arm.

1 15. The robot of claim 9, further comprising second
2 grasper means for grasping the object.

1 16. The robot of claim 13, wherein said first degree
2 of freedom pivots about an elbow axis and said second
3 degree of freedom slides relative to the elbow axis.

1 17. A method for operating a robot, comprising:
2 moving a mobile holonomic platform that is coupled to
3 an arm;

4 moving an arm coupled to the mobile holonomic platform;
5 and,
6 actuating a first grasper to grasp an object.

1 18. The method of claim 17, further comprising
2 grasping and moving a wheelchair.

1 19. The method of claim 17, further comprising
2 capturing an image in a camera that is coupled to the
3 mobile holonomic platform.

1 20. The method of claim 17, further comprising
2 displaying an image on a monitor coupled to the mobile
3 holonomic platform.

1 21. A robot system, comprising:
2 a broadband network;
3 a remote station coupled to said broadband network,
4 said remote station having a handle that can be manipulated
5 to generate movement signals that are transmitted through
6 said broadband network;

7 a robot that is coupled to said broadband network and
8 receives said movement signals from said handle of said
9 remote station, said robot including;
10 a mobile holonomic platform;
11 a camera coupled to said mobile holonomic
12 platform;
13 an arm coupled to said mobile holonomic platform;
14 and,
15 a first grasper coupled to said arm.

1 22. The robot system of claim 21, further comprising a
2 monitor coupled to said mobile holonomic platform.

1 23. The robot system of claim 21, wherein further
2 comprising a shoulder actuator coupled to said arm.

1 24. The robot system of claim 21, wherein said arm has
2 an elbow actuator.

1 25. The robot system of claim 21, wherein, said arm
2 includes a first linkage, and a second linkage coupled to
3 said first linkage, said arm further having an actuator
4 that moves said second linkage relative to said first

5 linkage in a first degree a freedom in a first mode, and in
6 a second degree of freedom in a second mode in response to
7 said movement signals.

1 26. The robot system of claim 21, wherein said first
2 grasper is coupled to a wrist joint of said arm.

1 27. The robot system of claim 21, further comprising a
2 second grasper coupled to said arm.

1 28. The robot system of claim 25, wherein said first
2 degree of freedom pivots about an elbow axis and said
3 second degree of freedom slides relative to the elbow axis.

1 29. A robot system, comprising:
2 a broadband network;
3 input means for generating movement signals and
4 transmitting said movement signals through said broadband
5 network;

6 a robot that is coupled to said broadband network and
7 receives said movement signals of said input means, said
8 robot including;

9 a mobile holonomic platform;

10 a camera coupled to said mobile holonomic
11 platform;
12 an arm coupled to said mobile holonomic platform;
13 and,
14 first grasper means for grasping an object.

1 30. The robot system of claim 29, further comprising a
2 monitor coupled to said mobile holonomic platform.

1 31. The robot system of claim 29, wherein further
2 comprising a shoulder actuator coupled to said arm.

1 32. The robot system of claim 29, wherein said arm has
2 an elbow actuator.

1 33. The robot system of claim 29, wherein, said arm
2 includes a first linkage, and a second linkage coupled to
3 said first linkage, said arm further having actuator means
4 for moving said second linkage relative to said first
5 linkage in a first degree a freedom in a first mode, and a
6 second degree of freedom in a second mode in response to
7 said movement signals.

1 34. The robot system of claim 29, wherein said first
2 grasper means is coupled to a wrist joint of said arm.

1 35. The robot system of claim 29, further comprising
2 second grasper means for grasping the object.

1 36. The robot system of claim 33, wherein said first
2 degree of freedom pivots about an elbow axis and said
3 second degree of freedom slides relative to the elbow axis.

1 37. A method for operating a robot, comprising:
2 generating a platform movement command;
3 transmitting the platform movement command through a
4 broadband network;
5 moving a mobile holonomic platform that is coupled to
6 an arm in response to the transmitted movement command;
7 generating a first arm movement command;
8 transmitting the first arm movement command through the
9 broadband network;
10 moving the arm in response to the first arm movement
11 command;
12 generating a first grasper command;

13 transmitting the first grasper command through the
14 broadband network; and,
15 actuating a first grasper in accordance with the first
16 grasper command.

1 38. The method of claim 37, further comprising
2 grasping and moving a wheelchair.

1 39. The method of claim 37, further comprising
2 capturing an image in a camera that is coupled to the
3 mobile holonomic platform.

1 40. The method of claim 37, further comprising
2 displaying an image on a monitor coupled to the mobile
3 holonomic platform.